REMARKS

Claims 1-16 are pending in the present application, of which claims 1, 2, 5-8, 11, 12, 14 and 15 have been previously withdrawn from consideration due to a restriction requirement. Claims 3, 4, 9, 10 and 16 stand rejected, and claim 13 is objected to, but is indicated to include allowable subject matter.

Applicant would like to thank the Examiner for the indication of allowable subject matter in Claim 13 if rewritten to overcome the noted informalities. To this end, the instant amendment is believed to place claim 13 in form for allowance.

The Office Action acknowledges the Applicant's claim for foreign priority and requests filing certified copies of the two Japanese applications filed on June 23, 1999, and November 4, 1999, respectively. As requested, certified copies of the priority documents are enclosed herewith.

The Office Action indicates that the drawings are objected to under 37 CFR §1.83(a) in that the drawings must show every feature of the invention specified in the claims, particularly the timing detection device of claim 9, the channel estimating device of claim 10, and a power calculator as described in claim 13. The Applicant respectfully disagrees with the Examiner that the drawings do not illustrate the foregoing features as recited in the claims, and would like to point out that the timing detecting device and channel estimating device are illustrated in Figure 12, and the power calculator is illustrated in Figure 19. Therefore, corrected drawings are not required and the objection should be withdrawn.

The Office Action also indicates that the specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. Particularly, the Office Action indicates that a correction to the Detailed Description section is required to include the description of the timing detection device as recited in claim 9, the channel estimating device recited in claim 10, and a power calculator as recited in claim 13. The Applicant respectfully disagrees with the Examiner and would like to point out that support for the timing detecting device recited in claim 9 and the channel estimating device recited in claim 10 may be found on page 28, lines 11-29 of the original specification. The peak detecting circuit and the rotation correcting circuit are supported on page 2, lines 16-22 of the original specification, and calculating a power value and selecting the reference rotation angle as recited in claim 13 are supported by the original specification on page 25, lines 14-21. Further, the Applicants would like to point out that amendment of the Detailed Description section is not required since in accordance with MPEP § 608.010 "the meaning of every term used in any of the

claims should be apparent from the **descriptive portion of the specification** ..." To this end, the original specification on the pages and lines mentioned above (among other places in the specification) fully supports the claims and correction or amendment of the detailed description section is not required.

The Office Action indicates that the abstract of the disclosure is objected to. In response to this objection, the Applicant submits herewith a replacement abstract with markings to correct the noted typographical error "ACF" as indicated in the Office Action. The Office Action indicates that the abstract of the disclosure is further objected to because it does not describe an embodiment elected for examination. To this end, the Applicant would like to point out that in accordance with MPEP § 608.01(b) and 37 CFR § 1.72, the purpose of the abstract is to enable an individual to quickly determine from a cursory inspection the nature and gist of the **technical disclosure**, and not the claims relative to the elected embodiment. Therefore, the Applicant believes that the present abstract of the disclosure complies with the guidelines, and further correction or amendment thereto is not required.

Claims 3, 4, 9 and 10 stand rejected under 35 USC § 103(a) as being unpatentable over Paradise (US Patent No. 5,179,573) in view of Leonard et al. (U.S. Patent 5,285,472). On page 5 of the Office Action, paragraph 15 states that Paradise does not expressly disclose a frequency error correcting device that counts the number chips of the baseband signals to be inputted, and performs a rotation correction by rotating a phase of the baseband signals by an angle obtained by dividing 2π by a number M. Further, in paragraph 16 the Office Action states that Leonard et al. disclose correction of a frequency offset in a dispreading device by rotating the phase of the baseband signal 45° steps at eight times per cycle via a phase rotator and a mod 8 counter prior to despreading (see Fig. 3; col. 3, lines 19-26). However, in a phase quantizer 16 of Leonard, an octant quantizer 36 operates to compress inputted I/Q signals only to phase information being any one of "0, 1, 2, 3, 4, 5, 6, and 7" (see Fig. 3, col. 3, lines 50-68). For example, the inputted complex vector signal [123,45] may be compressed to "0" by the octant quantizer 36, the compressed data "0" is output to phase rotators 56-66. Phase rotators 56-66 each perform addition or subtraction of free-running "0-7" to the compressed phase information "0-7" (see Fig. 3, col. 3, lines 56-64, col. 4, lines 1-24). Therefore, Leonard utilizes only phase information about a complex vector and the combination of Paradise and Leonard is deficient in that it does not teach or suggest the device of claim 3, particularly the frequency error correcting device that counts the number

chips of the baseband signals to be inputted, and performs a rotation correction by rotating a phase of the baseband signals by an angle obtained by dividing 2π by a number M.

In contrast, the device of Claim 3 is configured to maintain an amplitude information. That is, the phase rotator 85 shown in Fig. 9 rotates an inputted complex vector made up of an I component and a Q component by $\pi/4$ (45°) for example on an IQ complex plane (see Fig. 10, third embodiment). For example, in a rotation condition of $\pi/2$ (90°) corresponding to Step 2 (Fig. 10), when the complex vector signal [123,45] is input in the phase rotator 85, the value of [-45, 123] is output.

Leonard does not disclose a frequency correction (rotation correction) in a frequency error correcting device of the present invention by rotating an inputted complex vector on an IQ plane (complex pane) and thereby producing a new complex vector. Therefore, amended claim 3 and its dependent claims 4, 9, and 10 patentably distinguish over the cited prior art. Claim 16 has also been amended and is now believed to overcome the notes 35 U.S.C. §§ 101 and 112 rejections.

In view of the instant amendment, it is respectfully submitted that the claims are in condition for allowance. The Applicant kindly requests that the Examiner telephone the undersigned Applicant's representative in the event a telephone discussion would be helpful in advancing the prosecution of the present application.

Respectfully submitted,

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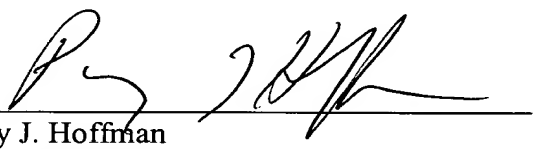

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